# Article information:

Carbon matrices with different pore structures as heat transfer intensifier in paraffin wax/carbon thermal energy storage system - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S0008622309008185?via%3Dihub>

# Article summary:

1. Graphite foam, carbon felt and compressed expanded natural graphite (CENG) were used to increase the heat transfer ability of paraffin wax as latent heat storage (LHS) medium.

2. Thermal conductivities of paraffin wax-graphite foam, paraffin wax-carbon felt and paraffin wax-CENG systems were enhanced by a factor of 437, 14 and 25 times, respectively, compared with pure paraffin wax.

3. Latent heats of the three systems were 42.34 J/g, 48.38 J/g and 57.82 J/g, respectively.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article is generally reliable in terms of its content and claims made; however, there are some potential biases that should be noted. Firstly, the article does not explore any counterarguments or alternative solutions to the problem being discussed; it only presents one side of the argument without considering other possible options or perspectives. Secondly, there is no evidence provided for the claims made in the article; while it cites a study from 2009 as a source for its data, it does not provide any further information about this study or how it was conducted which could lead to questions about its accuracy and validity. Finally, there is a lack of discussion about potential risks associated with using these materials as heat transfer intensifiers; while they may be effective at increasing thermal conductivity and latent heat storage capacity, there could be other factors that need to be taken into consideration such as safety concerns or environmental impacts that are not addressed in this article.

# Topics for further research:

* Alternative solutions to thermal conductivity
* Safety concerns of heat transfer intensifiers
* Environmental impacts of heat transfer intensifiers
* Validity of 2009 study on heat transfer intensifiers
* Thermal conductivity and latent heat storage capacity
* Counterarguments to using heat transfer intensifiers

# Report location:

<https://www.fullpicture.app/item/497cbfc46f8e4a5156f3ccf16e6beb9e>